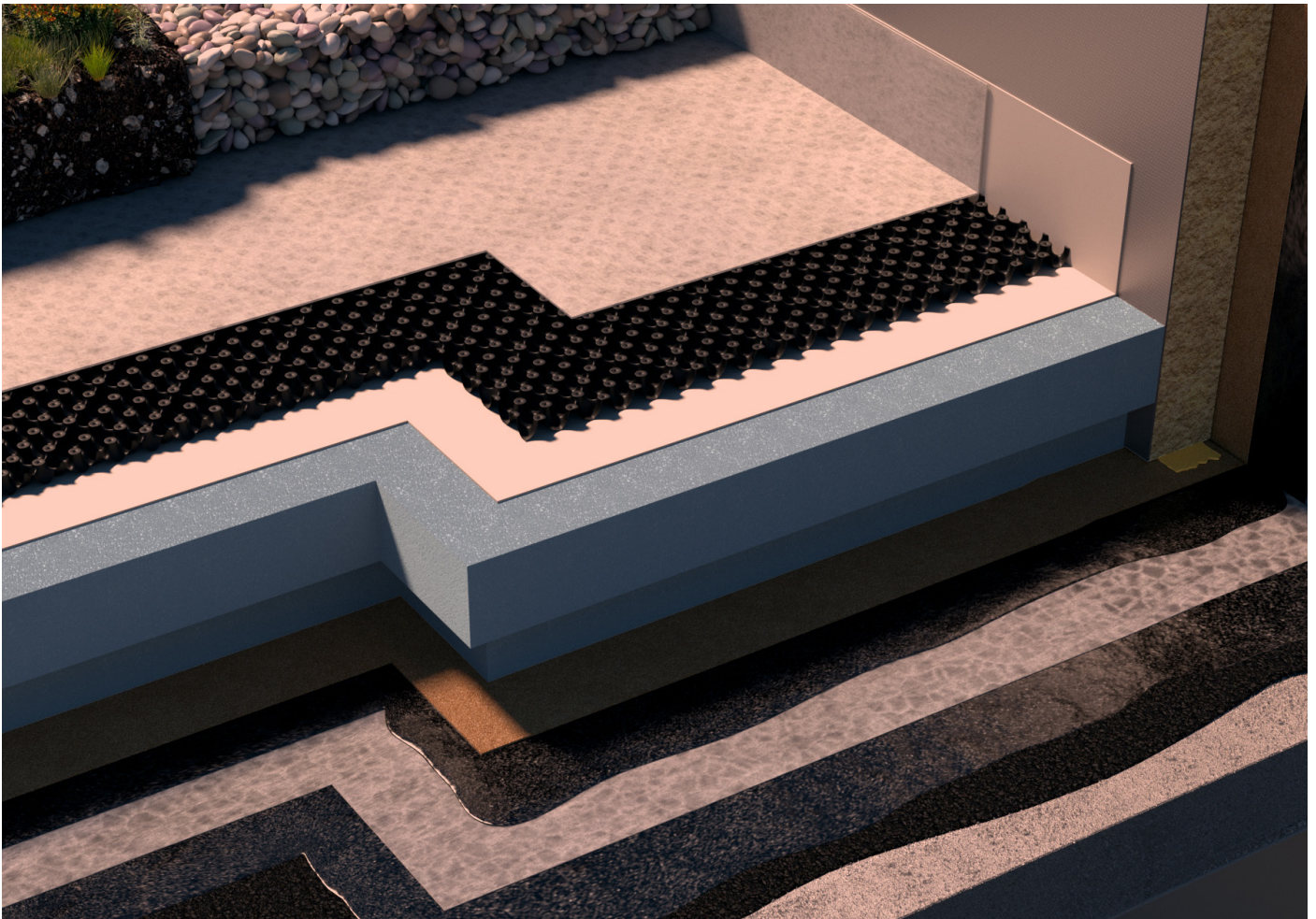


# RAVATHERM XPS X 300 SL ULTRA



Inverted Roof Insulation with a unique rigid, closed cell type extruded polystyrene board with integral high density skin.

Manufactured by



# RAVATHERM XPS X 300 SL ULTRA

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## General Information

RAVATHERM XPS X 300 SL ULTRA Inverted Roof Insulation is a unique rigid, closed cell type extruded polystyrene board with integral high density skin. RAVATHERM XPS X 300 SL ULTRA Inverted Roof Insulation utilises infra-red blocking particles to scatter and reflect heat radiation.

RAVATHERM XPS X 300 SL ULTRA Inverted Roof Insulation has a Zero Ozone Depletion Potential (ODP), a Global Warming Potential (GWP) of less than 5.

Use with RAVATHERM XPS X MK Water Flow Reducing Layer prior to the installation of paving, ballast, a green roof or timber decking.

For use with appropriate Waterproofing Systems.

## Certificates

ISO 9001:2008 Quality Management System, ISO 14001:2004 Environmental Management System, EPD as per ISO 14025 and EN 15804.

## Installation Instructions

Apply RAVATHERM XPS X 300 SL ULTRA Inverted Roof Insulation boards parallel to roof perimeter long edges. Stagger end joints.

Lay RAVATHERM XPS X 300 SL ULTRA Inverted Roof Insulation boards with edges in moderate contact without forcing.

Cut RAVATHERM XPS X 300 SL ULTRA Inverted Roof Insulation to fit neatly to perimeter blocking and around penetrations through roof, when using a 2nd layer stagger joints of insulation from first layer.

Apply no more RAVATHERM XPS X 300 SL ULTRA Inverted Roof Insulation than can be covered with aggregate ballast/concrete roof pavers/green roofing in the same day.

Keep RAVATHERM XPS X 300 SL ULTRA Inverted Roof Insulation minimum 75mm from heat emitting devices, and minimum 50mm from sidewalls of chimneys and vents.

## Fire Performance

BS 476 Part 3 : 2004 - When ballasted with aggregate (minimum depth of 50 mm), or fully-supported cast stone or mineral slabs of at least 40 mm thickness, a roof construction incorporating RAVATHERM XPS X 300 SL ULTRA may be considered to be of designation EXT.F.AA

(low vulnerability in Scotland) and as such is unrestricted by the National Building Regulations.

BS EN 13501-5:2016 'Euroclass A5' - When ballasted with aggregate (minimum depth of 50 mm), or fully-supported cast stone or mineral slabs of at least 40 mm thickness, a roof construction incorporating RAVATHERM XPS X 300 SL ULTRA may be considered to be of designation T4 and as such is unrestricted by the National Building Regulations.

BS EN 13501-1:2016 'Euroclass A1' - RAVATHERM XPS X 300 SL ULTRA Inverted Roof Insulation contains PolyFR, a REACH compliant flame retardant, that ensures Euroclass E performance.

Hexabromocyclododecane (HBCD) was phased out prior to the 21st August 2015.

# RAVATHERM XPS X 300 SL ULTRA

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## Delivery conditions

### Delivery form

Standard delivery form is a 'supercube'. Deliveries are on a curtain-side or optional flat-bed articulated vehicle. One supercube containing approximately 15m<sup>3</sup> and is approximate are 2400 x 2400 x 2500mm. A full articulated truck load contains 5 supercubes or approximately 70m<sup>3</sup>.

### Unloading

Supercubes are intended to be unloaded and crane lifted using strops in 2 movements;

1. lift the supercube clear of the vehicle and allow to settle
2. lift the supercube to roof level

Fork extensions can also be used to unload a supercube, and can be supplied with the delivery if requested in advance.

## Storage and transport

During shipment, storage, installation and use, this material should not be exposed to flame or other ignition sources. This material contains a halogenated flame retardant additive system to inhibit accidental ignition from small fire sources.

## Product identification

Information on the pack; Product name. Dimensions. Approvals.  
Production date. Batch number.

# RAVATHERM XPS X 300 SL ULTRA

## PRODUCT DESCRIPTION

Appearance top side	Grey Skin
Core	Grey color, HFC free, Extruded polystyrene foam XPS (EN13164).
Appearance bottom side	Grey Skin

## DECLARED PERFORMANCE

Essential characteristics	Performance	Unit	EN Code	Standard
Ozone Depletion Potential	Zero	-	-	-
Global Warming Potential	< 5	-	-	-
Density (aim, foam only)	34	kg/m <sup>3</sup>	-	BS EN 1602
Dimensions and tolerances				
- Thickness	70, 80, 105, 130, 145, 175, 205	mm	-	BS EN 823
- Width	600	mm	-	BS EN 822
- Length	1250	mm	-	BS EN 822
Thermal conductivity			T1	
Declared value (1)			$\lambda_D$	
- Thickness 80 - 205 mm	0.027	W/mK	$\lambda_D$	BS EN 13164
Design value (1)			$\lambda_D$	
- Thickness 80 - 205 mm	0.028	W/mK	$\lambda_D$	BS EN 13164
E-Modulus (typical)	12 - 20	MPa	CC(2/1.5/50)oc	
Mechanical properties				
- Compressive strength at 10% deformation	300	kPa	CS(10\Y)	BS EN 826
- Design load 2% max. deflection (50 years)	110	kN/m <sup>2</sup>	CC(2/1.5/50)oc	BS EN 1606
Hygrometric properties				
- Long term water absorption by immersion (28 days)	< 0.7	vol %	-	BS EN 12087
- Long term water absorption by diffusion		vol %	-	BS EN 12088
- dN $\geq$ 50 mm to <80 mm	$\leq$ 2	vol %	WD(V)	BS EN 12088
- dN $\geq$ 80 mm	$\leq$ 1	vol %	WD(V)	BS EN 12088
- Water vapour diffusion resistance factor ( $\mu$ ), typical	150	vol %	-	BS EN 10456
- Freeze/thaw, after 300 cycles	< 1	vol %	FTCD	BS EN 12091
- Dimensional stability under specified temperature and humidity conditions	$\leq$ 5	%	DS(70,90)	BS EN 1604
- Deformation under specified compressive load and temperature conditions	$\leq$ 5	%	DLT(2)5	BS EN 1605
Reaction to fire	Class E	-	Euroclass	BS EN 13501-1 2016
Linear thermal expansion coefficient	0.07	mm/m.K	-	-
Maximum service temperature	-50/+75	°C	-	-
Capillarity	0	-	-	-
Surface	Skin	-	-	-
Edge profile	Shiplap	-	-	-

(1) Declared thermal conductivity  $\lambda_D$  according to BS EN 13164 (§ 4.2.1; Annex A; Annex C.2 and C.4.1)

EN designation code T1-CS(10\Y)300-CC(2/1,5/50)110-WL(T)0,7-WD(V)3-FT2-DS(TH)-DLT(2)5

This information given in good faith and is based on the latest knowledge available to Quantum Insulation Ltd. Whilst every effort has been made to ensure that the contents of the publication are current while going to press, customers are advised that products, techniques and codes of practice are under constant review and liable to change without notice.

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